AVIATION

The Oldest American Aeronautical Magazine

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Army DH4 flying over Death Valley, as seen from another plane

VOLUME XVIII

NUMBER 11

SPECIAL FEATURES

SCINTILLA MAGNETO

THE BUILDING OF THE BOSTON AIRPORT

COL. J. E. FECHET APPOINTED ASST. CHIEF OF A. S.

GARDNER PUBLISHING CO., INC.
HIGHLAND, N. Y.
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Entered as Second-Class Matter, Nov. 22, 1920, at the Post Office at Highland, N. Y under Act of March 3, 1879

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VOL. XVIII MARCH 16, 1925 No. 11

A New Flying General

WHEN a well known personage is succeeded, the new appointee is given cordial greetings as the first courtesy. If a vote of the rank and file of the Air Service, and the latter are included advisedly, were taken, as to who is the most popular officer in the Air Service above the rank of Major, we believe that the selection would have been Lieutenant Colonel Fechet. He is a typical cavalry officer, dashing and fearless, and will make a fine leader of the flying forces of the Army. He is as outspoken in his views as General Mitchell whom he succeeds, and just as intolerant of red tape and official meddling. On him will rest the responsibility of standing for the things the Air Service believes in, and stating the case for the Airman. This is said without disparagement to General Patrick whose age precludes him representing in the public mind the flying type. Those who know the new Assistant Chief have no doubts as to his speaking his mind freely and without reservation. AVIATION wishes him every kind of success under his new star.

And now as to General Mitchell. It was almost a certainty that he was to be side tracked at the end of his four year detail in April. The general impression prevails that his "demotion" was due to his outspoken criticism of his superiors in the Army and his caustic references to the Navy. We do not share this belief. The successor to General Patrick will have to be selected within two years, when General Patrick retires and if General Mitchell were to have been reappointed for four years this prize of a Major Generalship would have been within his grasp. But with so many able Brigadier Generals on the General Staff to be rewarded for War records, the time was opportune to make the change. It probably would have been made quietly, as a routine matter, had not the press of the country focused attention on General Mitchell's predicament.

The Special Aircraft Investigating Committee seized on the popular clamor to get great publicity for its hearings, but was as bewildered by the glare of the limelight that it became peastruck and didn't make any collective effort to protect its star witness from the wrath of the "vested interests" of the Army.

The inevitable has happened. Brigadier General Hugh Drum is buzzing around the Air Service bee hive. Whether or not he will become king bee or get stung depends on future developments. It must be obvious to anyone who has followed the assignments to the position of Chief of Air Service of Generals Kenly, Menoher and Patrick that the War Department does not intend to allow any ranking officer in the Air Service to become strong enough to shake the tree and pick up the falling plum. That three Colonels and two Lieutenant Colonels were passed over is significant. No more important service can be rendered the Air Service, than to urge legislation which will require the appointment of Air Service officers to the posts of command. In fact, the next Session of Congress will undoubtedly enact laws which will have a profound influence on the future of our national air defense. Leaders, not followers are needed both in Congress and without.

General Mitchell needs no sympathetic commiseration in his change of position. His reputation is far greater than any rank gives. He has rendered the Air Service, aviation and the country a great service and it is recognized. Men achieve greatness by force of accomplishment and the fundamental correctness of their ideas. Long after his demoters are forgotten and the trivialities of the fray that has been going on in Washington are submerged by the weight of truth, General Mitchell will be remembered and receive the gratitude of history.

Praise Indeed

THOSE persons who have been casting longing eyes at Europe with the hope that over the waves there could be seen rising the real and true progress in commercial aviation, will be interested in Charles Grey's comment on English air lines in the last issue of *The Aeroplane*. He is writing about the Croydon accident which occurred on Christmas Eve. "The truth of the matter is that those who are responsible for Civil Aviation in this country, from the Director of Civil Aviation and the Directors of Imperial Airways downward, have all got into their heads an entirely wrong idea of how to run air lines. The only controller of an air line whom one had ever met who has the root of the matter in him is Colonel Paul Henderson, Assistant Postmaster General of the United States, who is responsible for the success of the transcontinental air mail between New York and San Francisco. That is the only really successful air line in the world and it is successful because Paul Henderson has adopted as his motto the words, 'The success of an air line lies on the ground.' "

Uninformed travellers from abroad as well as some that are informed and should know better have spread much optimistic bunk about the great things that were transpiring in Europe in the development of commercial air lines. It is refreshing to hear a frank admission that we are not so far behind as some of the casual observers of the "network of air lines" in Europe would have us believe. We agree heartily with the opinion that too little attention is usually given to the ground organization, particularly in promotion schemes. We are glad that Mr. Grey is emphasizing this part of the operation of air lines. It will serve to awaken the public to the two fundamental facts that seem to be essential to the success of aerial transportation. Transportation man for management. Competent ground staff for upkeep. The best equipment and operating personnel will be failures without these. And, we also agree about the capability of Colonel Henderson.

General Fechet

Col. James E. Fechet Appointed Assistant Chief of Air Service

If AVIATION were asked to suggest a soubriquet that the new Assistant Chief of the Air Service would receive as he becomes better known it would be "General General Jim." He will become the idol of the enlisted men, not only because he came from the ranks during the Spanish-American War but for the generous kindly consideration that has always been one of his noteworthy characteristics.

During the War he was among those officers who transferred to the Air Service and commanded several fields in this country. It was here that General Fechet made his reputation for ability as well as kindliness. Officers and men coming from under his command brought only praise for his work. His popularity was greatly increased while in Washington and serving as Chief of Training.

Gen. James Edward Fechet was born Aug. 21, 1877, at Fort Ringgold, Tex. His father was Col Edmond G. Fechet, who fought with Custer. His mother was a Miss Rachel Forsythe before her marriage. He attended the public schools of Jackson, Ohio, and the Worthington Academy, Lincoln, Neb. He was a member of the class of 1899 at the University of Nebraska, also at Lincoln, when the Spanish-American War broke out. He enlisted in the 6th U. S. Cavalry on April 18, 1898, and became a sergeant. Shortly after the declaration of peace he was discharged from the 6th Cavalry and commissioned a second lieutenant in the 9th Cavalry on Aug. 19, 1900. He received his promotion to first lieutenant on Feb 2, 1901. He participated in the Santiago campaign, being wounded at San Juan, July 2, 1898, and was in numerous skirmishes on the Island of Samar, P I, in June and July, 1901 In 1904, he was graduated from the Infantry and Cavalry School, Fort Leavenworth, Kan. He was a distinguished marksman, 1909, 1914 and 1915, and served with the punitive expedition in Mexico from March to September, 1916

On April 16, 1907, he married Miss Catherine Luhn He was promoted to captain on March 30, 1911. He started flying in October, 1917, and received the rating of Junior Military Aviator in November, 1919. He was appointed a lieutenant colonel in the Aviation Section of the Signal Corps on Aug. 5, 1917, and colonel on Feb. 26, 1918. During the World War he was commanding officer of the following stations: Scott Field, Carlstrom Field, Dorr Field and Kelly Field and Supervisor of Aeronautics for Southwest from September, 1918, to May, 1919

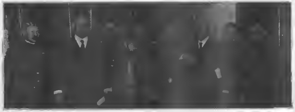
After the war he reverted to his permanent rank of major on June 30, 1920, and was rated an Airplane Pilot on the 9th of the same month. He became Chief of the Training and Operation Group in the Office of the Chief of Air Service and later Chief of the War Plans Division.

On July 1, 1924, he became Commandant of the Air Service Advance Flying School at Kelly Field, Tex.

Photo International

COL. JAMES E. FECHET

Presentation of the Collier and Mackay Trophies



Photo, Harris and Ewing

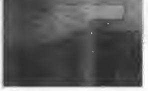
The Collier Trophy is awarded annually for the greatest achievement in aviation in America. The Mackay Trophy is awarded annually to the officer or officers of the U S Army who make the most meritorious flight of the year. The around-the-world fliers were awarded both trophies for 1924. In the picture are shown, from left to right, Gen. Mason M. Patrick, Secretary of War Weeks, Maj. H. C. Pratt, Maj Walter Kilner, Maj H. H. Arnold, Godfrey L. Cabot, Lt. St. Clair Streett, Lt. Leigh Wade and Lt. Leslie Arnold

The Building of the Boston Airport

By PROF. EDWARD P. WARNER

Professor of Aeronautics, Massachusetts Institute of Technology

With the flying season of 1925 about to open in the northern states, the problems of commercial flying and the obstacles which stand in the way of the full and rapid development of the use of aircraft for the transport of goods and passengers continue very much the same as they have been ever since 1919 The lack of adequate legislative safeguards, the difficulty of securing insurance, and the comparatively high cost of new airplanes of strictly modern design and planned expressly for commercial service are all of importance, but all are secondary, at least in the eastern part of the country, to the dearth of landing fields The haphazard plan of picking a promising field from the air after arriving at the destination of a flight may work out well in a level country wholly given over to agriculture, but in a thickly-wooded district, or one of rugged topography, or one where the urban centers have spread out over great areas, it leaves much to be desired. It is to the provision of a regular landing field, a true airport, that care must first be given by those forward-looking men who visualize the constant extension of air traffic in the future and who would like to see a share of the benefits of that extension accrue to their respective communities.



Site of the Boston Airport in 1922

Securing Good Airport is Difficult

The desirability of an airport is obvious, but the acquisition of a good one is not always an easy matter The Boston district has succeeded, after many vicissitudes, in securing a field admirably adapted to local needs, and Bostonian experience has covered so wide a range, and has included the consideration of so many locations, and the tentative examination of so many different ways of financing the field's purchase and preparation, that it must offer precedents and parallels valuable to other cities which, if they have not already made adequate provision for air traffic, will sooner or later have to tread a similar path.

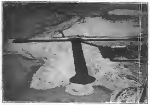
Flying in Massachusetts began early in 1910, when W Starling Burgess built his first airplane and operated it from a field on the coast about 30 mi. north of Boston That year had only half run its course before a real field, equipped with hangars, had been planned and a flying meet, to be the first in New England and the largest and most important anywhere in the United States up to that time, had been scheduled

The site selected for the first Boston airport was at Squantum, on the southern boundary of Boston Harbor and about 9 mi. distant from the center of the city, and it served for three meets and continued in intermittent use until 1913 With the entry of the United States into the war the ground was taken over for the construction of the Victory destroyer plant, and was therefore unavailable for aeronautical purposes after 1918, although it was at one time suggested that a site adjacent to the shipyard be used, and there actually is a Naval seaplane station there at present. The cost of adapting it for landplane use, however, would have been excessive.

To catalogue in full the locations which had been tried before 1916 would be tedious and purposeless There were approximately a dozen within 30 mi. of Boston, and their defects were various and numerous. Some were submerged at high tide, some were so small and rough and bordered with obstacles as to be available only for the slowest-landing airplanes and only with the wind in some particular direction, and some had other flaws, but none were even approximately satisfactory for permanent use under post war conditions.

Boston's Initial Effort

It was not until after the war that the problem really received any serious attention It was necessary that the Air Service officers stationed in Boston, attached to Army headquarters or pursuing studies in aeronautical engineering at the Massachusetts Institute of Technology, should have some place from which to fly It was necessary that there should be some base from which to conduct the aerial defense of the First Corps Area, covering that peculiarly vital and rather vulnerable section, the New England coast, in time of trouble Finally, there was a dawning realization of the importance of the role that aircraft might play in handling the commerce of the future, and a growing fear that a city unprovided with a flying field might find itself in a very unenviable position After a few experiments with other locations a field was located in Framingham, about 20 mi from Boston It proved reasonably satisfactory as a base for practise flying, although somewhat inadequate even for that purpose, but it was hopelessly deficient on every other count. Requiring a full hour to reach by train or automobile, the field obviously had little potentiality for commercial use, even if it had not been too small for safe operation with heavily loaded and slow-climbing commercial machines. Being 20 mi. from the coast, there was no possibility of close liaison with any seaplane base which might be established As a central point of aerial defense,



The hangars and runways of Boston Airport the morning of the official opening

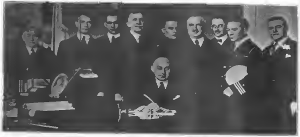
too, the small size and unfavorable surroundings disqualified the Framingham site.

The Army's desire for a new and better field was re-enforced by two other factors. In the first place, an aero squadron was being projected for the Massachusetts National Guard, and if a number of pilots who were regularly engaged in other business and had but little opportunity to keep up their flying skill were to be mustered into the service of the State it was evident that there must be accommodations superior to those which Framingham could provide. Second, would-be commercial pilots were already having their troubles. Carrying passengers from Framingham was impossible because the passengers could not be persuaded to go so far out, and companies engaged in aerial photography preferred to have their base of operations near the city office from which they had to solicit their business. The result was that several pilots attempted to operate from beaches and other open spaces near Boston, and the usual sequel of any such attempt was a descent by the park police and the payment of a fine in the local court. The most serious and most promising of commercial undertakings was given up in despair after contending with such conditions for two years.

Selection of New Site

While flying from Framingham continued, the search for a new location was being energetically prosecuted. The Boston Chamber of Commerce had become interested through the desire of its committee on Postal Facilities that the Air Mail come to Boston, and the chairman of that committee headed a committee appointed by the Aero Club of Massachusetts to investigate the question. Studying the situation in cooperation with Majors L. H. Drennan and Edwin B. Lyon, successively Air Service officers on the staff of the general commanding the 1st Corps Area, the committee first selected a site in South Boston, the land being owned by the Commonwealth as part of the program of development of the Port of Boston.

Early in the spring of 1921 the situation was taken up with the late John N. Cole, then Commissioner of Public Works of Massachusetts. Commissioner Cole was unwilling to approve the use of that particular land for aeronautical purposes, but suggested a site not theretofore considered by the committee, a piece of filled land owned by the State in East Boston, twelve minutes from the center of the business district by electric car or about six minutes by a moderately fast motor boat. The ground was rough and would require much grading and preparation, but seemed ideal in every other respect. The area was amply large, there were no high buildings or other obstructions in the immediate neighborhood, and the location on the harbor-front made it possible to provide for the use of both landplanes or seaplanes. Mr. Cole's suggestion was promptly accepted, and the movement for an airport entered its final stage.



Massachusetts obtains an air terminal at the Port of Boston—The Governor signing the Airport Bill in the presence of some of those who worked for and helped in its passage

In that final stage the Chamber of Commerce took a leading part. The Postal Committee, on Nov. 18, 1921, formally recommended that the Chamber direct its efforts toward securing the field in East Boston, and the recommendation was released to the press with the endorsement of the Executive Committee of the Chamber on Dec. 2. During the next month a petition for the necessary legislation was presented to the Legislature by the Chamber, and it was to the tireless efforts of the Chamber's president, Everett Morss, of E. W. Longley, chairman of the Postal Committee, Claude Allen, legislative counsel, Theodore G. Holcombe, secretary of the Aviation Committee, and many other members of the Chamber and its staff that the creation of the airport was very largely due.

The presentation of a petition to the state legislature was a rather unorthodox procedure, judged by the precedents set by other communities, for most locally-controlled flying fields are municipal. State action was justified in this case, as it would be in many others, because the field was to be a part, not of the City of Boston, but of the Port of Boston, and the benefits of a port are always recognized as spreading far beyond the immediately adjacent municipality. The interest in the creation of a great seaport and in its subsequent improvement is widespread, and so it should be with an airport. Massachusetts is proceeding on that theory.

How the Project was Financed

The legislature was petitioned to provide for the leasing of the land to the Army at a nominal rental, and also to appropriate $35,000 for the construction of the field runways and the erection of hangars to be furnished by the War Department. As it was recognized that this would not cover the cost, it was provided that the work of construction should not be undertaken until the deficit should have been made up by funds privately collected and deposited with the state, the preliminary estimate of the necessary amount being about $10,000.

Of the actual campaign for the passage of the bill it is unnecessary to speak at length. Preliminary hearings showed the extent of the interest among civic and military organizations and individuals, witnesses desiring to uphold the measure offering themselves in such numbers as almost to constitute an embarrassment to those having the matter in charge, and the members of the legislature displayed an almost unanimous desire that some road to the creation of the airport be found. There was no opposition to the leasing of the land, and only slight opposition to the appropriation from those who felt that all the money should be raised privately. Reported out of committee with a favorable recommendation in March, the bill was passed by both House and Senate on May 11, 1922, and became a law when it was signed by the governor on the following day.

How Boston Airport is Run

The bill, as finally passed, contained several provisions of considerable importance, which should find a substantial parallel in any similar measure drawn up elsewhere. The field was to be leased to the Army for a dollar a year, but the lease covered only the part of the ground actually used by the Army, the runways and hangar sites, the remainder of the terrain being reserved for lease to private companies or individuals for commercial use. The ever troublesome question of the conduct of a commercial enterprise on War Department property therefore cannot arise. The Air Service was given authority to police the field and the air, but it was expressly provided in the bill and in the lease that the field should at all times be open for commercial and private use under reasonable regulation. This has worked out very well, and the relations between civilian and military personnel have, in general, been congenial in the extreme.

The bill passed, it became necessary to raise the money to close the gap between the state appropriation and the cost of construction. When bids for the work had been opened, it was found that the necessary amount would be approximately $14,000, and it had to be found in about two months. The Chamber of Commerce undertook the solicitation of the funds, and, generously aided by the newspapers and a number of volunteer workers, succeeded. One paper even published a front-page cartoon setting forth some highly fanciful advantages of a flying field, and the breadth of the public interest aroused was attested by the receipt of approximately 600 subscriptions totalling more than $19,000, a very large part of which came in the last week. The city of Boston gave approximately $4,000, and $3,800 came from Godfrey L. Cabot, now president of the National Aeronautic Association, to start a special fund against any additional improvements that might appear necessary in the future. Of the remaining sum, roughly 40 per cent was contributed by local and national corporations, 60 per cent from individuals, and the part coming from individuals was about equally divided between gifts from those who had, and those who had not, had any direct connection with aeronautics or any close relative actively interested in flying since the war. One contribution, in fact, came from a gentleman who subscribed himself simply: "One who wouldn't fly on a bet."

Has Ample Facilities

The contract signed on Aug. 15, work was started immediately, and the coming of the following spring saw it well advanced toward completion. The first landings on the runways were made by the late Lieut. Kitchell Snow of the National Guard and Lieut. R. Curtis Moffat, of the regular Army Air Service, the Airport's first commanding officer, on June 5, 1923, and the Airport was officially opened, with more than twescore airplanes, Army, Navy and commercial, present to help celebrate the occasion on Sept. 8. Since that time many visitors have come by air, the most notable being Lieutenants Smith and Nelson and Wade and their mechanics, who dropped down out the sky to their first official landing in the United States on Sept. 6 last, home again after 25,000 mi of journeying in strange lands, and departed for New York two days later, exactly a year from the day of the formal dedication of the field.

The Airport was laid out originally with two runways in T form, each 1800 ft. long and 150 ft. in width and surfaced with cinders. As there are no obstructions at the end this gives enough room for almost anything except perhaps the landing of a racing machine or the take-off of the Barling Bomber. Ample space is, however, available for the extensions which will undoubtedly be needed in the future. Already, indeed, the legislature, encouraged by what had been accomplished, has made an additional appropriation of $9,000, and the runways have been somewhat widened and the approaches connecting them with the hangars much improved as a result. As the hangars now on the field are completely filled with the airplanes belonging to the Army and National Guard, the most urgent need of the moment is a hangar reserved for commercial and private machines, and it is hoped that one can be erected during the coming spring.

No effort has been spared to maintain and to spread the interest of the citizens in the Airport and its use. Special occasions have been set aside when all members of the legislature and other state officials and all members of the Boston Chamber of Commerce, with a total membership of more than 7,000, have been invited to fly with National Guard pilots, and many have availed themselves of the opportunity. The Airport belongs to the people of Massachusetts, and its owners are asked to keep themselves informed on the status of their property.

The last three years have seen Boston transferred from one of the worst positions among large American cities, so far as the location of its flying field is concerned, to one of the best. What has been done in the Boston district can be done elsewhere, and the problem which every city not already satisfactorily provided for sooner or later must face.

Standardization Tests of N.A.C.A. No. 1 Wind Tunnel

The tests described in this report were made by Elliott G. Reid in the 5 ft. atmospheric wind tunnel of the National Advisory Committee for Aeronautics, at Langley Field, with the primary object of collecting data on the characteristics of this tunnel for comparison with those of others throughout the world, in order that, in the future, the results of tests made in all the principal laboratories may be interpreted, compared, and coordinated on a basis of scientifically established relationships, a process hitherto impossible due to the lack of comparable data.

The work includes tests of a disk, spheres, cylinders, and airfoils, explorations of the test section for static pressure and velocity distribution, and determination of the variations of airflow direction throughout the operating range of the tunnel.

A copy of Report No. 195 may be obtained upon request from the National Advisory Committee for Aeronautics, Washington, D. C.

Weather Forecasts for Aviators

The advent of the Air Mail Service has added new duties to the Weather Bureau's already long list of services to the public. When transcontinental Air Mail service was extended across the continent in the early summer of 1924, and to include night flying, arrangements were made at the request of the Post Office Department to provide special weather forecasts for these trips.

These forecasts are issued from the district forecast centers at Chicago, and are made in two sections, one covers the route from Bryan, Ohio, to Omaha, Nebr., and the other the route from Omaha to Rock Springs, Wyo. In formulating these forecasts the forecaster has in mind conditions at the surface and at a distance of from 1000 ft. to 5000 ft. aloft. The predictions are made each morning and are available to both eastbound and westbound fliers at the Air Mail field at Omaha. An additional forecast is furnished in the evening whenever, in the judgment of the forecaster, decided changes are in prospect.

The Scintilla Magneto for Aircraft Engines

This Magneto Adopted by Navy Has Unusual Design Features Making It Particularly Rugged and Adaptable to Aircraft Use

In connection with the recent award by the Naval Bureau of Aeronautics to the Scintilla Magneto Co. of New York of an order for 500 Scintilla magnetos which are to equip American naval aircraft engines, the following particulars regarding this magneto will be of interest.

Detailed Description

The general appearance and the dissembled parts of the Scintilla AG-12-D Magneto are shown in the accompanying illustrations. Fig 1 is a view of the complete magneto, while Fig. 2 shows the magneto with the main housing cover and the breaker point housing cover removed. The distributor gear, the distributor cylinder, coil, its mounting and the contact breaker mechanisms are plainly visible

Fig 3 shows the dissembled units of the magneto, as follows:

(a) The lower section or body of the magneto, showing the pole shoe arrangement and outer ball bearing race

(b) The four pole rotating magnet, showing the taper drive shaft, the ball bearings, the small gear which drives the distributor gear, the laminated pole extremities and the cams

(c) The front end section of the housing Here may be seen the brass distributor gear, the distributor cylinder with its inserts and booster current ring, the outer race of the front ball bearing, and the distributor block spring lock.

(d) The advance and retard lever, which also forms the end cover of the contact breaker mechanism

(e) The contact breaker mechanism, showing the rocker lever carrying the contact point, the insulated cap carrying its mate, and the latch operating the bayonet lock. The eight dowel holes permit the advance and retard arm to be placed in as many different positions.

(f) The coil Here is shown the one electrical unit of the magneto. Curving over the top may be seen the short circuit bridge which connects the ground terminal with the primary circuit. One end of the core is clearly shown while at the left is shown the high tension carbon brush connection which passes the secondary current to the distributor cylinder

The housing, including lower, upper and front end sections, is of cast aluminum, finished on the outside with black enamel baked on. The short circuit wire binding post and the high tension booster connection binding post are located at the top of the upper housing At either end of the upper part of the magneto are located the oil hole covers. The front one also covers the timing window This window permits the Fig 1 on the distributor gear to be seen and facilitates timing the magneto to the engine. The lower section of the housing carries the laminated pole shoes which are cast with this piece. This lower section also carries the rear ball bearing outer race.

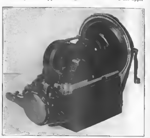


Fig 2 Scintilla AC12D magneto with the main housing cover and the breaker housing cover removed

The front end section of the housing carries the distributor gear, the distributor cylinder, and the outer race of the ball bearing The distributor gear stud bearing is so arranged that by loosening two screws, the proper clearance between the gear teeth can be maintained.

Unconventional Design

The magnet is the rotor Instead of the conventional horseshoe type of magnet, the Scintilla magnet rotates. It is a bell shaped steel forging with laminated pole extremities upon the ends of which is mounted a brass cap carrying the rear ball bearing and the cams The taper drive shaft is integral with the body of the rotating magnet.

The coil consists of a laminated core, a primary winding, a secondary winding, and the condenser The condenser is built in between the primary and the secondary winding. The coil is mounted on the top of the laminated pole shoes and is held in position by two angle screws, one at each end of the core. The high tension current is carried from the front end of the coil by a carbon brush to a brass insert located in the center of the distributor cylinder.

The contact breaker mechanism consisting of the rocker lever, cam follower and contact points, is located at the rear end of the magneto The assembly is mounted on a barrel shaped casting held in position by a hand operated bayonet lock. The contact points are located about 1½ in. above the rear ball bearing and the whole breaker assembly remains stationary during the make and break of the contacts. The clearance between the contact points when fully open, is between 0 011 and 0.015 in.

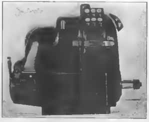


Fig. 1 Scintilla AC12D magneto for aircraft engines

English Air Appropriation $101,479,868

The new British air policy to build up an air force able to protect England against all comers and to perfect defenses, which would make any opponent hesitate before attacking the country, was presented to the House of Commons Feb 26 by Sir Samuel Hoare, the Air Minister, and was passed An expenditure of £21,316,300 ($101,479,868 at the present rate of exchange) is involved.

The policy provoked debate and the deep interest shown by the Commons gave evidence of the basic interest which England attaches to problems of air warfare.

In pointing to an increase of nearly £2,000,000 in the appropriation for the air forces, Sir Samuel said that the rise was due both to the depletion of war stocks and the new air policy.

The basis of the new policy, Sir Samuel said, was to treble the British air strength as it stood two years ago, when the nation turned seriously to the problem As to the need of the new policy, the Minister said that the development of air fighting had brought about a revolution

"This revolution," he said, "is far greater than the revolution produced by the invention of gunpowder in the later Middle Ages, and for a country like ours, which up to a few years ago, depended for its defense almost entirely on the sea and its navy, this revolution means more than to any other country in the world

"There is no use now in going into technical discussions or to exaggerate claims of air power, as to whether such and such a number of bombs could sink a battleship The central and undeniable fact is that an air force today, passing in a few moments over trenches and armies and channels and fleets, can penetrate into the very heart of this country, and, whether material damage might or might not be inflicted, could make life well nigh unendurable for popular living, mainly in the large cities.

"This vital danger we are trying to meet in the program before you. Fortunately, we are surrounded by old friends and allies, and so we can consider this issue without panic, and calmly plan measures for developing a scheme of defense that, however remote may be the possibility of danger, is none the less necessary to our national security and status. Let us not brood morbidly over remote perils, but, rather, take a sustained interest in the problem of defense which must be faced."

Sir Samuel said that under the new plans all combat air units would be under one command, without encumbering the air force with too many non-flying duties.

"All in all," he continued, "we intend to build up a system of defense which will make it not worth while for any hostile power to attack us in the air"

Sir Samuel then pointed to Iraq (Mesopotamia) as showing the use of an air force in the empire's defense. In a country with bad communications and a population known for its turbulence, order had been maintained by eight air squadrons, four infantry battalions and a few armored cars without the loss of a single British life for the last twelve months.

On the technical end, Sir Samuel assured the House that constant work was being done on improving pilots and bettering equipment. "Month by month," he said, "we gradually are introducing new types of machines, not machines to win records, but the kind of types which will arm our air service with more manageable machines than any one else has."

In response to a question, the Minister said

"The Government is giving due consideration to the danger of the world getting into an air armament race and plans for limitation"

He referred to technical difficulties, saying that the purpose of limitation might not be served by fixing numbers of certain kinds of airplanes, adding that there are "airplanes and airplanes," and that the issue is very much harder to deal with than with battleships, unless the Government wishes to risk ruining civil aviation. He also doubted the wisdom of restricting the number of pilots.

"Whether it is possible to limit air warfare," he said "remains to be seen. We are all familiar with the manner in which in time of war paper restrictions are thrown aside. However, the Government would not set aside any suggestions for limiting the terrible dangers of air warfare in the future. For, with the development of airplanes, the development of bombs and gas, if air warfare goes on developing, the warfare of the future may mean the destruction of civilization as we know it today But, whether or not the difficulties in the way of the limitation of air warfare are insuperable for the present, we must proceed with air expansion and with the determination to continue to build up a system of air defense which will make the risk of air attack less likely and make the danger to the civilian population much less immediate than now. I urge the House to proceed step by step in this undertaking to fill the path of any aggressor with the utmost peril."

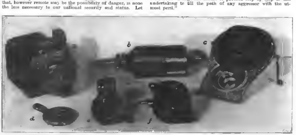


Fig 3 Dissembled units of the Scintilla AC12D magneto—(a) body of magneto (b) four pole rotating magnet (c) front end section of housing, (d) advance and retard lever, (e) contact breaker mechanism, (f) the coil, which is the one electrical unit of the magneto

Stability and Controllability of Airplanes

Part II—Tailplane and Elevator

By B. V. KORVIN-KROUKOVSKY

In the above discussion we come to the conclusion that the tail plane is responsible only in a very moderate degree for the static stability, and that its main purpose is to balance the forward position of the center of gravity needed for stability. The condition of the balance, however, does not determine the size of the tail plane, as a small surface set at a large negative angle will give the same balancing effect as a large surface set at a small angle. *The size and shape of the tail plane are determined entirely by the condition of dynamic stability.* We must remember that under dynamic stability we mean the tendency of the oscillations, set up by static restoring moments after some accidental disturbance, to die down in a fairly short time. The oscillations die down due to the action of the damping moments generated as the very result of oscillation, in very much the same way as the oscillations of a pendulum die down because of the friction in its suspension generated by the very fact of its movement. It is evident that the larger is the damping, the quicker the oscillations will die down, and the value of damping can be taken in practice as a criterion of dynamic stability.

By far the largest portion of the damping in case of the oscillating airplane is produced by the tail plane moving across the wind with each oscillation, and the effect of other parts of the airplane, including wings, can be disregarded in this connection. It can be readily shown that for a given air speed and quickness of oscillations the damping is proportional to the area of the tail plane, its distance from the center of gravity and its lift coefficient. The moment coefficient due to the tail per one degree of its angle of attack can be taken therefore as a very convenient and simple criterion of damping, and hence of dynamic stability. The value of this coefficient is derived in the Appendix II and is as follows

$$B_m' = \frac{s}{S}\,\frac{L}{l}\left(\frac{0.1}{1+\frac{2}{R'}}\right)$$

where S and s are areas of the wings and tail plane respectively;

- L is the distance from the center of gravity of the airplane from the center of pressure on the tail which is always assumed to be 25 per cent of its chord;
- l is the length of the mean chord,
- R is the aspect ratio of the tail plane taken as its span squared and divided by the area; $R = b'^2/s$. This definition automatically takes care of any plan form of the tail plane. By "tail plane" we mean the combination of stabilizer and elevators.

The value of the damping coefficient B_m' for satisfactory handling qualities of the airplane must be confined to the range from 0.020 to 0.035, and better from 0.025 to 0.030. The lower values can be used for highly maneuverable machines with the weights well concentrated, such as rotary engined scouts. Higher values should be used for machines with a moderate degree of maneuverability and weights well spread out either in horizontal or vertical directions, such as flying boats. The values quoted are purely empirical and were arrived at by different designers as the result of many years of development and endeavor to obtain good handling qualities in their airplanes.

The following values of the coefficients are found in four machines credited with excellent handling qualities:

SE5a single seater pursuit	0.021
Vought VE7 advanced training	0.025
Fokker DVII single seater pursuit	0.029
De Haviland 4 observation	0.030

It has been mentioned before that cases of dynamic instability are very rare. Indeed, the values of the damping coefficients given above are probably much higher than are strictly needed for dynamic stability, and are desirable merely to insure a comfortable "feel" of the elevator control and to prevent overcontrolling. In an airplane with insufficient damping coefficient the inertia of the machine will tend to carry each movement beyond the required amount until checked by reverse action of the elevator. This means that the pilot will have to furnish by means of proper elevator movements the artificial damping to counteract the lack of natural one. No matter how stable a machine is, statically only a very small moment is needed to start pitching at the attitude of balance. Jerky movement of controls by an inexperienced pilot or student may start a movement of the airplane at successive rate, and, if the damping is insufficient, the momentum gathered at the beginning of the movement will carry it on despite the action of the static restoring forces generated by that time. In this way a very stable (statically) machine can be stalled, although its great stability would make a stall impossible if the control movements were slow and an advantage was taken of its inertia. On the other hand too large a value of damping will produce a sluggish machine.

A certain degree of sluggishness is essential for comfortable controls, as well as for stability, but it should not be excessive. The designer is therefore advised to choose the value of the damping coefficient by comparison with satisfactory existing machines of the general type he is designing. It will not do to pick the value of the damping coefficient for a single-seater scout and incorporate it in the large flying boat.

Efficiency of the Elevator Control

It remains now to consider the efficiency of the elevator control, which was stated to be one of three basic factors determining the handling qualities of the airplane as far as longitudinal control is concerned. The basic requirements of the efficient control arrangement are

(a) Securing maximum controllability with maximum degree of static stability.

(b) Securing maximum controllability with maximum degree of damping.

(c) Securing maximum effect of controls on the airplane with minimum effort of the pilot.

It is impossible to consider the effect of the elevator without considering the stabilizer at the same time, as one has great influence on another. In fact, as is shown below, it is the plan form of the stabilizer and elevator, and their relative areas that entirely govern the efficiency of the controls.

If we consider the controllability of an airplane flying at its trimming speed, we can dispense immediately with item (a). No matter how stable statically the airplane may be, only a small moment is needed to start motion from the condition of balance. When a heavy seaplane is being hoisted up on a long rope it takes but a slight pressure of the hand to make it oscillate. All ordinary maneuvers such as gentle turns, putting the machine in climbing or gliding attitude, etc.

Fig. 4 Obsolete form of tail plane used on the Blériot XI monoplane of 1909

involve only small change in the angle of incidence, and consequently bring in play only small static stability forces. Severe maneuvers, such as loops, require change of the angle of incidence of some 8 deg., but these maneuvers are usually

started at an air speed much above normal, when the natural tendency of a stable machine is to zoom, otherwise to act with the controls rather than against them, at least at the beginning of the maneuver. We will consider later the action of the elevators used to balance the machine at some speed different from the trimming one, but at present we will consider only the action of controls on the machine initially in good balance.

Assuming that static restoring forces do not come into play, as explained above, we must conclude that practically the total effect of the controls is directed toward overcoming the damping and inertia of the machine. At the beginning of a maneuver, however small, both damping and inertia act in the same direction and must be overcome by the controls, at the end of it, damping works against the inertia, and the controls are called for only to supply the deficiency of one or another. It would seem, therefore, that the design of the tail plane must be such as to eliminate as much damping as possible at the beginning of a maneuver, when the elevators are in action, and to generate as much damping as possible at the end of a maneuver when the elevators are returned to the neutral position. This seemingly impossible requirement is yet not only possible but very easily attained, and the designers since 1909 and up to the present time gradually drift toward its achievement, although usage of the past and the lack of clear understanding of the control action materially hamper the progress. Let us now consider the action of two extreme kinds of the tail planes.

The first one, shown on Fig. 4, is the tail plane of Blériot XI built in 1909. It consists of a central stabilizer and of elevator made in two halves and placed at the tips of the tail plane. Here the elevator has very little influence on the stabilizer, and air pressure on the elevator itself is the only force producing controlling moment. The air pressure falls off rapidly toward the tips of any airfoil, hence the elevator so placed are very ineffective. The stabilizer, on the other hand forms the middle half span of the tail plane and therefore is very effective. Its damping, little affected by the action of the elevators, resists any movement of the machine. Inertia of the machine, coupled with effective damping and very ineffective elevators, result in very sluggish response to the controls. The excessive sluggishness in this arrangement of the tail plane can be avoided only by reducing the stabilizer area in favor of the elevator area, which results in insufficient damping and unsatisfactory behavior with hands off. As far as we know this arrangement was used only on small airplanes. Any attempt to use such a large elevator area on a large airplane probably will result in large and irregular control forces, as the balancing cannot be depended on to be equally good at all angles of attack, particularly at the tips where the air flow is very irregular. Thus we see that in this arrangement of the tail plane neither condition (b) nor (c) are satisfied, and reasonable controllability can be secured only at the expense of damping and large and irregular control forces.

Fig. 5 Modern form of tail plane, used on the Dornier Wal flying boat

The opposite conditions are found in the tail plane of Dornier "Wal" flying boat shown on Fig. 5. Here the elevator forms the trailing edge of the tail plane and every movement of the elevator affects the air distribution over whole of the tail plane. When the elevator is displaced to effect the maneuver, it forms together with the stabilizer an equivalent to a cambered surface, instead of the original symmetrical one, which tends to move bodily in the direction of its convex side. What would have been damping is transformed here into a force producing the desired movement. Yet, when the elevator is returned to the neutral position the damping is as good as ever. In this arrangement there is absolutely no objection to providing the proper degree of damping, as it vanishes completely at the beginning of a maneuver at first displacement of the elevator.

Considering the stability of an airplane flown with hands off, we may roughly assume this condition to be equivalent to the elevators being completely removed. In the first case, that of the Blériot XI, this would leave the tail plane of twice smaller area and twice smaller aspect ratio, or about *three times* less effective in damping. In the second case (Dornier tail plane) the loss of the elevator area is only 27 per cent of the tail plane, and this is largely compensated by improved aspect ratio, so that resulting loss in damping would be barely felt.

The great majority of the tail planes used at present fall between these two examples, and are equipped with trailing edge elevators of a span somewhat larger than the span of the stabilizer, and occasionally with overhanging balance. Their action in maneuvering is more or less perfect, depending on how close their shape comes to the second example discussed above, i.e. how little of the elevator area projects beyond the stabilizer.

(To be continued)

The Merrill full scale wind tunnel. The air stream is provided by four OX5 engines each driving a tractor propeller and straightened out by the honeycomb. In this way full scale experimentation can be carried on without risk

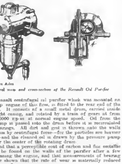
Engine Accessories at Paris Aero Salon

Renault Oil Purifier—A.M. Gasoline Pump—Engine Starters

A number of interesting engine accessories were to be seen at the last Paris Aero Salon. Among these the Renault oil purifier, various types of self starters and the A.M. gasoline pump deserve particular mention. We are indebted to *The Aeroplane* for the descriptions of these gadgets.

The Renault Oil Purifier

As is well known, one of the most important requirements for keeping an engine in smooth running for long periods at a time is to have some means whereby the lubricating oil may be kept clean of the gritty particles which accumulate in the sump, chiefly from wear of the bearings. If this is not done, the impure oil will circulate less and less freely and finally score the cylinder walls, bearings, gears, etc.



Courtesy Les Ailes

General view and cross-section of the Renault Oil Purifier

The Renault centrifugal oil purifier which was mounted on the 480 hp engine of this firm, is fitted to the rear end of the crankcase. It consists of a small metal drum, carried inside an oil tight casing, and driven at a train of gears at from 5000 to 6000 r.p.m. at normal engine speed. Oil from the engine sump is passed into the drum before it is recirculated to the bearings. All dirt and grit is thrown onto the walls of the drum by centrifugal force—for the particles are heavier than oil—and the cleaned oil is drawn by the pressure pump from near the center of the rotating drum.

It is said that a perceptible coat of carbon and fine metallic dust can be found on the walls of the purifier after a few hours' running the engine, and that measurements of bearing wear have shown that the rate of wear is materially reduced when the purifier is in service.

The A.M. Gasoline Pump

The A.M. type of gasoline pump is now in almost universal use on French aircraft, is a plunger pump of variable throw, and is usually driven directly from the engine.

The piston of the usual type of plunger pump is, in the A.M. type, replaced by a metal bellows of the Syiphon type used on certain barographs, closed at one end by a hemispherical dome carrying a piston rod, and permanently fixed at its other end to the cover of the gasoline vessel which takes the place of the cylinder. Thus the bellows entirely keep gasoline from contact with the piston rod and its packing gland, and no moving joint is in contact with gasoline.

The piston rod beyond the packing gland is formed into a ring, inside which runs an eccentric of a diameter considerably less than that of the ring. The plunger is forced out toward the top of the stroke by a spiral spring inside the bellows, and the eccentric, when rotated, alternately compresses and releases the spring and causes the plunger to reciprocate.

A shaft having at its end a tongue engaging on the inside of the piston rod ring can be moved backward and forward parallel to the piston-rod travel. If this rod is pulled out to its extreme limit it lifts the ring out of contact with the eccentric and withdraws the plunger to its extreme closed position. That is, the stroke of the plunger becomes zero, and the pump delivers no gasoline. As the rod is made to move back the plunger is permitted to reciprocate with an increasing stroke, until finally it has the full stroke, corresponding to the throw of the eccentric.

The body of the pump is fitted with automatic suction and delivery valves of the disc type.

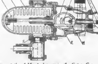
The pump is intended to be used for direct feed to the carburetor, or to a sealed feed tank, and when so used, becomes entirely automatic in action. The actual pumping stroke is carried out by the spiral spring within the bellows, and therefore there is a definite limit to the gasoline pressure which can be produced. That being so the actual gasoline output is governed by the needle valve of the carburetor. If this is closed the pump plunger is held up at the end of its stroke by the gasoline contained in the body.

As the needle valve opens, the plunger's rate of movement is limited by the rate at which the valve allows gasoline to pass. It is obvious therefore that the real stroke of the pump is entirely controlled by the float and needle valve system of the carburetor, and provided that this system is adjusted to give the correct level under the pressure head given by the pump, the output will correspond exactly with the engine demand for fuel.

Electric Self-Starters

The Farman engines are all arranged to carry an electric self-starter of the automobile type. This naturally is somewhat heavy—the motor weighs about 20 kg and the battery 26 kg—say 105 lb. for an engine of up to 800 hp. But in the majority of cases the weight of the battery may be neglected, or, at least, considerably discounted, as the same battery will serve for lighting and similar purposes.

M. Tampier exhibited two small auxiliary engines for starting purposes. One, of the four-cylinder type, is meant for use on his "*avions-automobiles*" and is fitted with one gear box to drive the road wheels, another to couple up to the main engine to start that, and with a pulley drive for a



Cross-section of the A.M. fuel pump. A—Outer Case, B—Sylphon, C—Inlet Valve, D—Outlet Valve, E—Piston Driving Ring, F—Cam Space, G—Spring, H—Tension Regulator, I—Eccentric Cam

lighting or wireless generator. The other is a two-cylinder opposed, water-cooled unit with a 40/1 reduction gear and a dog clutch to start the main engine.

There were several gas starters exhibited. The Viet-Schneebelh starter is perhaps the best-known of these. The engine requires to be fitted with a gas-distributor similar to that

needed for the R.A.E. type or the still older compressed-air type of starter. An explosive mixture of air and acetylene is pumped into the engine by a double-barrelled hand pump—one barrel of which takes acetylene from a dissolved acetylene bottle through a reducing valve and a rubber gas-bag and the other barrel, of much larger bore, pumps air. The mixture strength is settled by the relative capacity of the two barrels, and its explosive quality is therefore reliable and uniform. The mixture is fired in the ordinary way by a hand-operated magneto. The arrangement is said to function with regularity and certainty—but its dependence on supplies of dissolved acetylene is a serious disadvantage.

Herzmark Gas Starter

The Herzmark starter is another form of gas-starter which in an early form was demonstrated in England but was not then altogether satisfactory. It is claimed however that it now fuctions with extreme success. The engine is fitted with a special distributor to which leads two separate gas-leads. These are connected by the distributor one to a cylinder which is on the firing stroke and the other to a cylinder which is on the compression stroke and which in the ordinary course of events will be the next to fire.

Each of the gas-leads to the distributor is coupled to one of twin reservoirs which by the use either of a hand-pump or a compressed-air bottle, are charged with air to a pressure of 10 kg./cm.². (about 150 lb./sq. in.). On opening the exhaust valves of these twin chambers the air passes a sort of carburetor, and the explosive mixture so formed is passed to the two selected cylinders.

As the air from each reservoir is equal in volume and at equal pressure, and as each of the two cylinders is supplied quite independently of the other, it can be seen that if one of the two cylinders concerned is on or near top dead center and the other be well down its stroke, then there is less room for the expansion of the gas in the first cylinder and the air pressure in that cylinder will be greater than in the one near bottom dead center. If the mixture in the first were then to be fired, the torque created would be small, and would be resisted by the compression torque in the second cylinder.

But as the gas pressures in the two cylinders are different, the engine turns so that the pistons of both cylinders approach the half-stroke position, and the mixture is fired by a hand magneto after this has occurred.

The Saintin starter is another of the gas type. It consists of a steel compressed air reservoir of some five liters capacity which is charged to a pressure of about 90 lb./sq. in. This can be inflated with a hand-pump, and kept charged in the ordinary way by a small engine-driven pump. Air from this cylinder is passed through a hand-valve, a small carburetor and the usual distributor, to the engine cylinders. A hand magneto, agitated normally, is used to fire the mixture. The whole apparatus is said to weigh 18 lb. and to give complete satisfaction on engines of all types in service.

S.M.N. Starting Cylinder

The S.M.N. starter is of a different class. It consists of a cylinder, fitted with a piston and spark plug, a hand-pump, a small carburetor, and a starting magneto. The piston has attached a piston rod with rack teeth cut in it. These teeth engage with a pinion, which in turn drives a shaft, and through a ratchet-gear the end of the engine crankshaft. The piston is normally held up at the top of its stroke by a stiff spiral spring. In use air is pumped through the carburetor to the starter cylinder, the piston is driven down, causing the ratchet to rotate and engage the crankshaft, and turns the engine until the compression of a cylinder holds up to the starter torque. A hand-magneto is then turned, and ignites the mixture in the starter cylinder, which jerks round the engine itself. At the same time the rotation of the starter shaft turns a distributor, which switches the hand-magneto off the starter plug and onto the main engine distributor center point.

At the end of the starter piston stroke an exhaust valve is opened, the piston is driven back by its spring, and if the engine has not started the process is repeated until it does so.

Book Review

Air Power and War Rights. By J. M. Spaight (Longman, Green & Co.)

To a country powerless in the Air, as demonstrated glaringly in the Washington Aircraft Investigation, it is interesting to see the evolution of thought in a country like Great Britain, which realizes that when the next war comes, there must be coordination of land, sea and air forces under one Supreme Command. So great is the value attached to Air Power, that the defense of the British Isles is now entrusted to an Air Officer.

With the development of modern aerial bombs and poison gas, which can be distributed effectively from planes over large areas of population in a limited space of time, it is easy to understand the fundamental reasons underlying this great change in the conduct of war.

In "Air Power and War Rights", Mr. Spaight traces in a most interesting way the evolution of war, and the revolutionary methods which we are approaching and fast putting into operation, so far as its future conduct is concerned.

What is the new role of Air Power? Will it be unrestricted, and will civilization be exterminated in the next major conflict? People everywhere are beginning to realize that the next war will be fought in the air, and the frightfulness and illimitable possibilities for wholesale slaughter and ruthless devastation is trickling into the national consciousness.

The International Air Convention at Prague in 1922 dealt only with rules of law applicable to aircraft employed in commercial transportation. At the Hague, in 1923, rules were drawn up prohibiting poison gas warfare, and also indiscriminate bombing of cities. But Mr. Spaight's admirable book is the first to interpret these new and little understood rules, and to show some of their inherent weaknesses. "The doctrines of the military objective and of the combat area may be worked into a regime of air bombardment that is satisfactory within circumscribed limits. . . . They must, however, be considered also in relation to the wider question of air bombardment as a whole, that is, of civilian as well as military property."

The bombardment of cities, towns, etc., not in the immediate neighborhood of the operations of land forces is prohibited. Lines of transportation used for military purposes are excluded. But, as Mr. Spaight so aptly puts it, "One is then faced by the difficulty that, in a war of any magnitude, there is hardly a mile of rail or a single railway station, which is not a "line of communication or transportation used for military purposes, and therefore, all large cities will be subject to bombardment"

There is ample evidence, says Mr. Spaight, "that aircraft may be used in future wars, not merely to attack military objectives, but also to destroy property in the enemy's country. The object of the attack will be moral, psychological, and political, rather than military."

Clearly then, there is need for an early revision of the rules of air warfare, so great has been the development in this new field since, the first attempts to regulate were made.

Under "Air Combat", Mr. Spaight cites innumerable instances of the chivalry, which still exists among the "Knights of the Air", but which according to all writers on the subject, was conspicuously absent so far as the land forces were concerned.

Air Power is a new subject, rules of air warfare are as yet comparatively untried, but Mr. Spaight has treated a legal subject in a broad, humanitarian way, drawing on International Law, as generally understood, for many splendid illustrations. Furthermore, he has expressed in the way of recommendations exactly what is in the popular thought regarding an increasingly popular subject just at this time.

W. Jefferson Davis.

Regulations for the Gordon Bennett Cup

Special Regulations for This Year's Race

The Aero Club of Belgium having created the Second Gordon Bennett Cup, the latter will be rompeted for at Brussels on June 7, 1925, under the follnwing regulations:

The race will be run under the General Regulations of the F.A.I. and under the special regulations governing it adopted by the Central Committee of the F A I at its meetings of Dec. 18-20, 1924.

The following regulations, drawn up by the Contest Committee of the Aero Club of Belgium, will also govern it.

Art. 1—Entries must reach the Aero Club of Belgium, 73 Avenue Louise, Brussels, before April 1, 1925 The names of the pilots and a statement of the cubic capacity of their respective balloons must reach the Aero Club of Belgium before May 15, 1925 (decisions of the Committee of the F.A.I.).

Art. 2—The balloons will be inflated at Brussels. The start will be made on Sunday, June 7, 1925, after 4 p m.

Art. 3—The Cup will be awarded in conformity with Art. 16 of the General Regulations for the Gordon Bennett Cup. The prizes designated below will be awarded to the winners as their personal property 1st. Prize—(a) the sum of 12,-500 francs, (b) half of the total amount of the entry fees that are not repaid and the forfeits, (c) the large sport plaque of the Aero Club of Belgium; 2nd Prize—(a) the gold plaque of the Aero Club of Belgium, (b) one third of the total amount of the entry fees that are not repaid and the forfeits, 3rd Prize—(a) the silver plaque of the Aero Club of Belgium, (b) the remainder of the total amount of the entry fees that are not repaid and the forfeits.

Special prizes and medals The participants (pilots and aides) will receive the souvenir medal struck in commemoration of the race; in addition, special prizes may be added later

Equipment

Art. 4—Equipment In addition to the balloon proper, each contestant must be provided with the following. (a) 25 meters of inflation tubing, 300 mm. in diameter, (b) 100 ballast bags for use in inflation, (c) one inflating canvas; (d) one barograph intended to supply data on the account, this instrument will be lead-sealed by the officials.

Art. 5—Shipment The equipment must reach Brussels, with all charges paid, between May 30 and June 2, inclusive, and should be addressed as follows "Compagnie Ardennaise de Messageries et de Transports, a Bruxelles-Entreport, Bureau Restant."

The following notation is to be made on the way bill, in the column marked "Contents," below the statement of the letter "Materiel aeronautique destine a participer a la Deuxieme Coupe Gordon-Bennett 1925, organisee par L'Aero Club de Belgique." ("Aeronautic equipment to be used in competing for the Second Gordon-Bennett Cup in 1925, established by the Aero Club of Belgium") The shipping cases should be marked plainly and exactly with the name of the owner of the balloon, so that they may be identified on arrival at the station and so as to insure exemption from customs duties.

Art. 6—Transportation The Aero Club of Belgium will attend to transportation, at its own expense, from the station of Bruxelles-Entreport to the building on the starting field, for those contestants who *request* this, but does not assume any risk on this account. The contestants who take advantage of this arrangement agree to entrust their equipment to the "Compagnie Ardennaise de Messageries et de Transports" for the return trip, which company will charge them its regular rates.

Art. 7—The Aero Club of Belgium will provide watchmen and guards for the equipment at the depot at the starting field.

Art. 8—Verification of the cubic capacity of the balloons will be attended to by the Contest Committee of the Aero Club of Belgium from June 4 on. The contestants or their representatives are requested to be present at this operation.

Art. 9—Helpers will be provided by the Aero Club of Belgium both for moving the equipment from the shed to the place of inflation and for handling the balloons during inflation, the pilot or his representative being responsible.

Art. 10—As inflation is to begin on June 6, not later than 4 p. m., the balloons must be in their places, ready for inflation not later than 2 p. m. of that day, stations will be assigned by drawing lots.

Art. 11—Gas (special illuminating gas) will be furnished to the contestants without charge.

Art. 12—The log and the landing certificate will be provided by the Aero Club of Belgium.

Notification after Landing

Art. 13—In conformity with the F.A.I. Regulations, the contestants are required to send a telegram immediately after landing to the following address: Aero Club Bruxelles. This telegram must state briefly the time and place of landing and the name of the nearest city (Art. 132 of F.A.I. Regulations). The flight record and the landing certificate, duly made out, must be sent by registered mail within twenty-four hours after landing (Arts. 122, 125, 126 of the F.A.I. Regulations) to the President of the Aero Club of Belgium, 73 Avenue Louise, Brussels. The contestants are advised to indicate the point of landing accurately by means of reference marks which can easily be located on the General Staff map.

Art. 14—In case Russian territory is considered neutral ground, the following line will be taken as the Russian frontier: (a) the meridian 27 deg. East of Greenwich, from the Arctic Ocean to the Finnish coast of the Gulf of Finland, (b) the part of the Finnish coast of the Gulf of Finland lying between 27° and 25° of the longitude East of Greenwich, (c) the meridian 25° East of Greenwich from the Finnish coast of the Gulf of Finland (near Helsingfors) to its intersection with the Dniester, (d) the course of the Dniester from this latter point to the Black Sea. A contestant who might cross the above line would have his landing-point marked at the point of intersection of this line and the arc of the earths circumference passing through the point of landing and the point of departure.

Art. 15—The landing will not be considered regular unless at the time and the place at which the landing is made the pilots are in possession of the envelope, the suspension ring and the basket of their balloon.

Art. 16—Contestants are reminded that any intermediate landing is forbidden.

Art. 17—It is prohibited to disembark either assistant or passenger.

Safety Provisions

Art. 18—Strict penalties will be provided for any act which might entail danger to the public, particularly throwing out full ballast bags, carelessness in starting, etc.

Art. 19—Each balloon must carry its national flag as well as the colors of the club which it represents.

Art. 20—By the very fact that they have entered, the responsible contestants, constructors and pilots declare: (a) that they are acquainted with these regulations and accept their provisions, as well as those of the F.A.I. Regulations, (b) that they accept responsibility for any accident to things or personal which may happen to themselves, to passengers or to third parties, to their craft or to any other property, real or personal, either during preliminary trials or during the race, and that they release the Race Committee of the Aero Club of Belgium of all responsibility in advance; (c) that the Aero Club of Belgium and the Contest Committee refuse in advance to accept any responsibility of this nature.

The general regulations for the second "Gordon-Bennett" Cup are the same as those for the original "Gordon-Bennett" and are, therefore, not included in the foregoing.

AIRPORTS AND AIRWAYS

Huntington (W. Va.) News

E O Gnaer is having the Shank-McMullen Aircraft Co install a new OX5 in his Jennie Mr Gnaer is a mattress manufacturer with interests in Huntington and Cincinnati, Ohio, and uses his plane to reduce the time lost in traveling between the two cities.

John Woods was in from Roanoke, Va., last week and reports the sale of five new planes in that vicinity during the last three months.

Edw Burgess, automobile dealer of Ashland, Ky., recently purchased a TM Scout from the Shank-McMullen Company and is installing an OX5 motor in it. He intends to use it for advertising purposes

J W James of Huntington recently lost an HS2L boat in the high waters of the Ohio river The boat is under twelve feet of water and the real cause of its sinking has not been ascertained. It was tied to the shore and no one was present when it sank.

Flying Conditions from New York to Florida

Pilot E P Lott of the Fairchild Flying Corp and Mrs Lott, who left New York Wednesday morning, Feb 4, in the Fairchild Fokker camera plane, arrived in Lakeland, Fla., on Feb 7 The flying time from New York to Lakeland was 905 min. The Fairchild Company has several mapping contracts in Florida, and inasmuch as there was no commercial plane available down there which could do the work, it was decided to send its own machine from Garden City.

Mr Lott had several interesting experiences on the flight south which he recounted in a letter to the New York Office of the Fairchild Company Mr Lott said in part

"The longest flight in point of time was from Richmond to Fayetteville, a distance of 177 mi, which we covered in 3 hr 15 min. I had very little trouble about gasoline anywhere, excepting Jacksonville where I had to wait two hours besides having to buy 54½ gal (a drum) and pay $5 00 extra in order to get the 30 gal of gasoline that I needed The fields I used were excellent, the worst one being at Lakeland We left Garden City at 10 45 a. m and we made fine time into Washington, arriving there at 1 20 p m. We left for Fayetteville at 2 45 p. m, with just about time to make it before dark if the tail wind still held. I landed near Richmond to make a slight adjustment on the engine. We grounded at 3 50 p m. on a one-mile race track. We stayed overnight there and left Thursday at 9 35 a m. headed for Fayetteville We arrived there at 12.35 p m and found that because you are over Fayetteville is no sign that you are anywhere near Pope Field I spent 15 min looking for it and then had to throttle down and call to a farmer, who finally understood me after two attempts and pointed in its direction. Pope Field is about ten miles northwest, a little more north than west, but as my information had been that it was five miles west I actually had been looking a little southwest because a railroad went in that direction and I supposed they had a siding (which they have at Camp Bragg, but on another railroad)

"Lieutenant Holden treated us very nicely and we were ready to leave at 1 50 p m., headed for Columbia, because I saw it would be impossible to make Savannah, 240 mi, against the wind We arrived at Columbia at 4 10 p m. 140 mi. in 140 min There was a very good field there inside a one-mile race track with five Marine DH's lined up on it, a Standard Oil tank wagon, and all the modern conveniences. The DH's were coming through from Pensacola and had made 500 mi. from Montgomery, Ala., in 4 hr 10 min. with the same wind that I had been bumping behind them.

"We left Friday at 9 30 a. m headed for Savannah but hoping that we could pass it by and make Jacksonville Until this time there had been plenty of cotton fields, which we might possibly have been able to get into After we got about 80 mi out of Columbia, I noticed that there was nothing underneath us but swamp lands—not even a road. I soon figured out that if I had to go down in that stuff, it would take a week to get out with practically no chance of ever getting the ship out, so I flew over to the nearest railroad (about 10 mi) and stuck pretty close to that into Savannah on the assumption if I could land on the railroad right-of-way I would thus have a small chance of saving the equipment if forced down From there on there was nothing else but swamps. I made Savannah in ample time to proceed on to Jacksonville but decided to stay over I found a very nice little field about a half block away from a gas station in part of a playground right in the city limits This may sound good, but you can fly a hundred miles in any direction and more in some directions without finding another place to land excepting the beach along the coast, which is for the most part uninhabited and in the event of a forced landing would make it necessary to travel through 20 mi. of swamp to the railroad We landed at Savannah at 10 a. m and left at 11 20 a m. We landed at Camp Johnson, which is about ten miles southwest of Jacksonville, at 1 10 p m. This is a very good field, with the exception of grenades all about which is somewhat hard on the tires I had to wait two hours for gas here We left Camp Johnson at 3 10 p m with only 150 mi airline but actually 180 flying miles to go due to my policy of following the railroad I kept kidding myself that the country would improve as I went on, but I was absolutely wrong I took one railroad out of Palatka for Ocala and after about four miles the track stopped and nothing remained but roadbed tie However, this was much better than swamps. There is a stretch about ten miles south of Ocala that is all right, but outside of that I can truthfully say there isn't a single decent flying field from Savannah to Lakeland excepting Jacksonville and the strip mentioned, and excepting of course the beaches below Jacksonville on the East Coast. We landed at Lakeland at 5 30 p m and our trip was over."

Akron News

On Feb 20 at a noon luncheon attended by more than 400 members of Akron aeronautical colony was held Capt Charles Nungesser, French Ace, and Maj Frank Kennedy, A S., who was the army observer on the delivery flight for the Los Angeles to the United States, were the principal speakers. Congressman Martin L. Davey was toastmaster

Following the meeting the famous French flier placed a wreath on the grave of Lieut. Harold A. Kullberg, Akron aviator who until his death was the president of the Commercial Aircraft Association here. Kullberg was an Ace in the R.A.F. during the World War

Brig Gen Lord Thomson, head of England's Air Ministry during the Ramsey MacDonald administration was the guest of honor and a speaker at the annual meeting of the Akron chapter, The National Aeronautic Association. Lord Thomson spoke at a mass meeting following the dinner

Charles W Seiberling, of the Seiberling Rubber Co., was elected president of the Akron chapter of the National Aeronautic Association at a recent election of officers, succeeding P. W Litchfield, vice president of Goodyear who served as president during the past year C B Raymond, vice president of the B F Goodrich Co, was elected vice president of the aeronautical group

Eight members of the Goodyear Aeronautical Staff, headed by J M. Yolton are now at Scott Field, Belleville, Ill, beginning the erection of work on the semi-rigid airship "RS-1," built by Goodyear for the Army.

Des Moines, Iowa, News

Des Moines fliers and supporters of aviation turned out in force at a meeting recently promoted by the Chamber of

Commerce, and organized a chapter of the National Aeronautic Association, with over 50 members. Speakers at the organization meeting were Ralph W. Cram, governor for Iowa, representing the N.A.A., former Senator Lafayette Young, and Harvey Ingham, editor of the Des Moines Register. At a later meeting the Chapter elected officers as follows: President—Clarence M. Young, Vice President—Edward O'Dea, Secretary-Treasurer—Warren R. Jackson; Directors—Harvey Ray, Howard Ensles, Ralph Penn, Geo. Louis G. Lasher, Fred Provnall, George Yates.

Eddie Rickenbacker was a special luncheon guest of the Chapter, at its first meeting after organization, and for April 24 it has booked Jack Harding and Lowell Thomas to tell the story of the World Flight at the Coliseum.

Detroit News

Dr J. A. Nowicki who has been flying a Curtiss Seagull with a Curtiss K6 engine for some time, has ordered a new ship The Seagull was damaged in a slight crash last fall after giving good service for two years and the "flying doctor" has decided to try a landplane for a change. Accordingly he has ordered a new Curtiss Standard from the Hunt Aviation Co. of Detroit, to be fitted with his K6 engine and a Reed metal propeller The doctor expects to do considerable cross-country flying in his new ship this year, including the races in the fall

* * *

The air folk of Detroit have joined the growing ranks of those holding weekly get-together meetings. The first was held at the Union League Club of Detroit on Thursday, Feb 13, with an attendance of fifteen and the next week of over thirty Comdr Ralph D Weyerbacher, of the Naval Aircraft Factory, was the speaker at the twentieth. He was in Detroit for nearly a week visiting the Aircraft Development Corp. Visitors are invited to drop in at any time.

* * *

Matt Quay Corbett, formerly chief of the Balloon and Airship Section, McCook Field has joined the Aircraft Development Corp recently Another new addition is G Betancourt formerly with the Curtiss company and member of the 1924 class in aeronautics at New York University

No Competition with Aerial Photo Concerns

The Manager of the Curtiss Exhibition Co., C S. (Casey) Jones, wrote a letter to the Chief of Air Service under date of Jan 30, as follows:

"My dear General Patrick.—

"It is our understanding through various statements made by yourself and your bureau that it is your desire to cooperate and promote commercial aviation as much as possible, and we would like to take this opportunity to point out to you what we consider a very good chance for you to cooperate with us in the early part of March.

"On Inauguration Day there is going to be considerable demand for airplanes for carrying pictures and films from Washington to New York, Boston, Philadelphia, Cleveland and Chicago. We have already been approached as to the possibility of supplying service. In the past it has been the custom of the various branches of the Government to supply planes for this service, allowing any of the newspapers and film companies to send their material by plane. Naturally, these people will not pay for this service, if they can get it from the Government for a nominal cost or for nothing, and we realize that considerable pressure will be brought to bear by them, assisted by Congressmen and politicians, to get the Government to furnish this service on this date. However, as soon as the newspapers and film companies learn that the Government will not furnish such service, they will come to the commercial operative companies for this service, will pay for it, and can afford to pay for it. We believe that this is an excellent chance to foster commercial aviation, and if a statement be prepared now by the various services that no such service will be furnished at Inauguration, it will probably save your office a lot of trouble in turning down such demands, and will be of vast assistance to us.

"Naturally, in making our plans for this date, it is very necessary that we know what policy you will adopt, as we would appreciate an early statement from you in order that we may plan accordingly."

In reply to the above letter, General Patrick wrote to the Curtiss Exhibition Co, under date of Feb. 6, as follows

"In reply to your letter of Jan. 30, 1925, I desire to state emphatically that the Army Air Service does desire to foster civil aeronautics. In pursuance of this policy, this office recently recommended to the War Department the issue of definite instructions to that effect so far as aerial photography was concerned. This was done because it was realized that civil aerial photographic concerns had grown up and developed in this country to a point where they would handle the great bulk of this work. Your letter makes it clear that the Army Air Service can now extend this policy by restricting the use of military aircraft for the transport of civilians and merchandise. Wherever it is clear to me that civil aeronautic companies are in a position to do work of this nature and where the doing of it by military aircraft would clearly be a violation of our policy of non-competition by military authorities with civil concerns, the Army Air Service will be very careful to refuse to lend its planes and personnel to such civilian enterprise.

"I understand that the policy outlined above has also been adopted by the Bureau of Aeronautics of the Navy and the flying service of the Marine Corps."

Instructions have been issued to Commanding Officers of all Air Service Activities to the effect that, when requests are received from individuals for the cooperation of the Air Service by furnishing aircraft for civil undertakings which would clearly come within the view of the above letters, their action on same be guided by the policy of the Chief of Air Service as disclosed in his letter to the Curtiss Exhibition Co

South African Air Mail Service

The new Labor Minister of Posts and Telegraphs of the Union of South Africa, T Boydell, has authorized the inauguration of an air mail service between Durban and Cape Town. This service is an experimental one and is to be run by the Union Air Force with machines donated to South Africa by the Imperial Government As these machines are the ordinary English DH9's and are fitted for military service, only about 20 cu. ft. of cargo space in the observer's cockpit will be available for mail Due to this fact there will be no passengers carried.

This service is authorized for three months only and is intended to investigate the possibilities of the route The service was scheduled to start on March 2 with one flight per week each way. The route will be divided into four stages, as shown in the following timetable:

Lv	Monday	8 30 a.m.	Cape Town	Arr	3 25 p.m.	Friday
Arr	"	10 30 a.m.	Mossel Bay	Arr	10 50 p.m.	"
Arr	"	1 00 p.m.	Port Elizabeth	Arr	10 30 a.m	
Arr	"	3 02 p.m.	East London	Arr	8 50 a.m	
Arr		6 00 p.m.	Durban	Lv	5 00 a.m.	

There will also be emergency landing fields at Umtata and George. The total length of the route is nearly 1000 mi The main function of this service will be to connect with the mail packets at Cape Town. The first mail from London using this service closed Feb 13. The extra air mail charge is 6d. per ounce. The director of this service is Col. Sir Pierre van Ryneveld, chief of the Union Air Force, who will also be remembered as the only successful competitor in the Cairo to Cape Town flight a few years ago.

As a result of the seconding of the majority of the members of the Union Air Force to this service, only a training flight will be maintained at the headquarters at Zwartkopf who will continue the work of giving refresher courses.

Texarkana

The Texas side council of the city of Texarkana at its regular session has added another ordinance to the long list of local aviation ordinances with one prohibiting airplanes flying over the city at altitude less than 2,000 ft. It also includes provisions against flying over the city between the hours of 6 30 a. m. and 1 00 p m. on Sunday and piloting of aircraft by unskilled pilots.

UNITED STATES AIR FORCES

U. S. ARMY AIR SERVICE

Selfridge Fliers Carry Emergency Mail

Selfridge Field fliers recently acted as emergency postmen when two towns in Michigan, located on the extreme points in that part of the State known as the "Thumb" were snowbound and had not received mail for about ten days. Port Huron, Mich., sent an S O.S. call to Selfridge Field, requesting that a plane be sent there equipped to carry mail to Bad Axe and Harbor Beach, the towns in question.

Lieutenant Johnson received the assignment, and with Sergeant Dwyer of the 57th Service Squadron as passenger, flew a DH, equipped with skis, to Port Huron and landed on the St. Clair River Here the plane was loaded with some 400 lb. of mail, which was dropped at the towns mentioned, the airmen returning to Selfridge Field the same evening

Air Service Personnel in Washington, D. C.

Maj. Gen. Mason M. Patrick, Chief of Air Service, made two brief trips to New York City during February. On his first trip Feb 11, he delivered a lecture before the American Institute of Electrical Engineers, while on his second trip on the 18th he spoke before the National Industrial Conference Board

Gen Wm Mitchell, Assistant Chief of Air Service, was a visitor in Boston, during the early part of February and delivered a lecture before the Beacon Society

Majs. Ira A Rader, D P Netherwood, S W Fitzgerald and Lieut. C W Steinmetz are now taking the course at the Industrial War Plans College.

Maj. H H. Arnold was assigned as Chief of the Information Division on Feb. 2 upon completion of his course at the Industrial War Plans College, while Capt. Thomas J Hanley, Jr, who also completed this course, was assigned to duty in the Office of the Assistant Secretary of War

Lieut. Ames S Albro returned to his desk in the Industrial War Plans Division after two months' leave in Texas.

Lieut. L. L. Koontz, on duty in the Training and War Plans Division, was transferred to McCook Field, Dayton, Ohio, for duty.

Lieut. J C. Cluck was relieved from duty in the Supply Division, and upon completion of leave of absence he is now taking, will proceed to Brooks Field, San Antonio, Tex., for heavier-than-air training

Capt R E O'Neil was relieved from duty in the Training and War Plans Division, and transferred to the Industrial War Plans Division, replacing Capt. D B Howard who, upon expiration of leave of absence granted him, will proceed to Brooks Field, Tex, for heavier-than-air training

Officers who visited Langley Field during the month were Lieut.-Col Ira F Fravel, Maj James A. Mars and Capt. D B Howard

The following officers reported in during the month for temporary duty Majs T D. Milling, Carl Spatz, C. W Howard, H A Strauss, Capt. F O D Hunter, Lieuts. C B Austin and Wm J Hanlon

Maj. H H Richards paid a visit of several days to Fairfield Air Intermediate Depot. Shortly after his return he became ill and was taken to the hospital For a while the Major was very sick but latest reports indicate improvement. Lieut. Col Ira F Fravel is also a patient at the hospital

Lieut M. S Lawton returned on Feb 15 from leave of absence in South Carolina

Picking Up Messages from the Ground

During a recent inspection of Crissy Field, Presidio of San Francisco, Calif., the Corps Area Inspector was very favorably impressed with the field, particularly the system of picking up messages from the ground by a plane in flight. This system consists of a heavy lead "fish" attached to the end of the wireless antenna on the airplane Welded to this fish are four hooks Two men on the ground, fifty feet apart, hold two poles above their heads, suspended between the poles is a string with a message attached thereto As the plane flies low over the message, the observer lets out his fish with the hooks attached and the string and message are picked up on the hooks and drawn into the plane by the observer

World Flight Commander Presented with Plane

In appreciation of the valiant services of Capt Lowell H Smith, commander of the world fliers, Leslie C Brand of Glendale, Calif, capitalist and pioneer aviator, presented him with a LePere airplane said to be valued at $30,000 and one of three of its kind in the United States. This unusual and substantial gift to Captain Smith for his efforts in behalf of American aviation supremacy was accepted by him with expressions of gratitude At the time of the presentation Captain Smith was visiting in Los Angeles, where his parents reside.

The plane was built by W. D. Waterman and later was rebuilt by Donald Douglas, builder of the world cruisers. The machine was one of several that Mr Brand keeps in a hangar on his estate north of Glendale.

Army Air Orders

Capt. Truman W. Allen, A.S., retired from active service.

Maj Charles B. Meyer, A S., (Coast Art. Corps), Brooks Field, to San Francisco, sailing on transport June 17 for Philippine Islands.

First Lieut. Robert Kauch, A S., McCook Field, to New York City, sailing on transport for Philippine Islands May 28.

Capt. Vernon L. Burge, A.S, upon completion of foreign tour to Mitchel Field

First Lieut. Jack Greer, upon completion of foreign tour to Rockwell Air Int. Depot.

Spec Or 20 amended to direct Sec. Lt John L. Davidson, A S., to sail for Hawaiian Islands on transport March 25

First Lt. Harold H. George, A S, Salt Lake City, to Kelly Field.

First Lt. Clarence H. Welch, A S., Brooks Field, to San Antonio

Resignation of First Lt. Frank Walter Seifert, A.S., accepted

First Lt. Christopher W. Ford, A.S, Langley Field, to Boston, for duty with 301 Obs. Group, 11 Corps, Org Res.

Promotion of Capt. Michael Frank Davis, A.S., to grade of major, announced.

Resignation of Maj Henry Abbey, jr, A S, accepted

Maj Roy M. Jones, A S, Kelly Field, to New York City, sailing April 9 on transport for Canal Zone

Promotion of Sec. Lt. Dwight Joseph Canfield, A S., to grade first lieutenant announced

Resignation of Capt. Harry Britton Flounders, A S., accepted.

First Lt Frederic B. Wieners, A.S., upon completion of foreign tour, to San Antonio Air Int Dep

First Lieut Raymond Morrison, A S, upon completion of foreign tour, to Marshall Field

First Lt. Paul H. Prentiss, A.S, Brooks Field, to San Francisco, sailing May 14 on transport for Hawaiian Islands.

Sec. Lt. Townsend Griffiss, A S, Brooks Field, to San Francisco, sailing on transport May 14 for Hawaiian Islands.

Sec. Lt Herbert W. Anderson, Coast Art. Corps, detailed to A.S., relieved from assignment and duty Fort Winfield Scott and ordered to Brooks Field.

First Lt. Arthur Thomas, A S., Kelly Field, to San Francisco, sailing March 24 on transport for Philippine Islands.

Capt. Thomas J Hanley, jr., A S, Off Chief of A.S, to Off Asst. Sec. of War.

PUBLISHER'S NEWS LETTER

Now that the letters have stopped coming, the telephone calls are not as numerous and the friends we meet can speak of some other subject we can have our little smile over the transposition of the captions in AVIATION, two issues back. It may be possible that one or two of our readers did not notice the error but it hardly seems probable, from the volume of correspondence calling our attention to the mistake. When "Jennies" are called PW8's by the oldest aeronautical publication in the country things have come to a pretty bad way. As the Curtiss Company suggested, it might indicate that we had transferred our activities to emulating Mr Ziegfield and intended to start Glorifying the American Jenny. But over a period of eight years only two or three such breaks have occurred.

* * * *

The one that will be remembered the longest was the Roma picture which was published after the accident and showed what appeared to be a distorted tail surface. It was reproduced just as it was furnished by a picture agency. It was supposed to have been taken on the day of the accident. The ink had hardly dried before letters from the Air Service and also from the Italian Air Attache made pertinent enquiries as to the manner in which we had obtained the illustration, and pointed out that the day the photograph was made the airship was at Bolling Field and was moored by a line. This line had disappeared in the cut. The picture even deceived a board of officers that was holding an enquiry at Langley Field. The upshot of the hullabaloo was solved when it was found that the picture was given out by the Air Service itself after the accident and was thought by the picture people to be one taken on the day of the wreck. Corrections of this kind are simple, but the Jenny—PW8 mixup is not so easily passed on to others.

* * * *

As was announced recently, our capable editor, Mr d'Orcy, has left for a trip of observation of aeronautics in Europe. The last thing that he did before taking the steamer was to OK the pages of the issue in which the error was made. But the two cuts were about the same size and the captions became transposed. All of which is related to save the trouble of replying to the many messages of correction. But there is one kind of criticism that might be mentioned before the incident is closed and that is the assumption that the editor thought that the Jennies were PW8's. He is by now flying in Europe and therefore cannot himself adequately and humorously reply to these insinuations. It is probable that if he were here that he would make the point that one crash through the fault of an operator does not indicate any lack of engineering skill on the part of the constructor. And with that kindliness for which he is gifted would have preferred to have been thought at fault than to have placed the blame on the mechanical department. So endeth a chapter that has afforded many a chance to help us read proof and give to AVIATION a very real indication that every page is read with a discerning eye by a host of readers.

* * * *

While on the subject of errors, a mention might be made of the forthcoming issue of Whos Who in American Aeronautics. Here is the one place where slips cause real permanent embarrasment. Dates, names and places have to be accurate or they are worthless. In preparing this very valuable collection of facts we have to rely on the individuals whose biographies appear. If they do not send corrections for the present work it will not be possible to have it as complete as we hope to make it. Many have replied promptly but there are still a number of sketches that have been submitted for revision that have not been returned. We urge those who have delayed the correction of their own biographical data to send them to us as promptly as possible and help us to give a very complete and accurate list of those who should have a place in this reference book.

* * * *

Also we will be glad to receive any sketches from any who should be in such a book. It is, of course, impossible for us to send requests to everyone and this opportunity is taken to invite additions to the list. The requirements are that the sender be an active pilot or that he is engaged in aeronautics at the present time. We will very greatly appreciate receiving from any of our readers any information that will make the book more valuable. It ought to be ready in about two months.

* * * *

We are anxious to secure more correspondents at the various flying fields and would appreciate any assistance that our readers care to give. If you do not find in AVIATION, news from any field in which you are interested send similar news to the editor and it will be greatly valued. For the last year, this department of the paper has grown mainly through the cooperation of our helpful readers. May their tribe increase.—L.D.G.

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